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BIHAR ELECTRICITY REGULATORY COMMISSION
Ground Floor, Vidyut Bhawan-II, J.L. Nehru Marg, Patna

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NOTIFICATION

The 23rd August, 2017

No. BERC-SMP 47/2016-04—In exercise of powers conferred under section 181(1)(za) read with sections 57, 58 & 59 of the Electricity Act 2003 (36 of 2003) and Regulation 34 of Bihar Electricity Regulatory Commission (Standards of Performance of Distribution Licensee) Regulations, 2006 and all powers enabling it in that behalf, the Bihar Electricity Regulatory Commission hereby amends the Principal Regulation **"Bihar Electricity Regulatory Commission (Standards of Performance of Distribution Licensee) Regulations, 2006",** which was issued vide notification No.-1/2007 dated 18.01.2007 published in the Bihar Gazette No. 83 dated 22.01.2007. Commission notified 1st Amendment to the Principal Regulation vide notification No. 1226 dated 12.12.2012 and published in Bihar Gazette No. 666 dated 12.12.2012.

1. Short title, extent and commencement:

(i) These Regulations may be called the Bihar Electricity Regulatory Commission (Standards of Performance of Distribution Licensee) (2nd Amendment) Regulations, 2017.

(ii) These Regulations extend to the whole of the State of Bihar.

(iii) These Regulations shall be applicable to all distribution Licensees in their respective licensed areas in the State of Bihar.

(iv) These Regulations shall come into force on the date of their publication in the official Gazette.

2. Amendment in Regulation 12(c) :

The existing regulation 12(c) shall be substituted by following:

"12(c) Harmonics:

(i)   Harmonics generated by one consumer may affect the normal operation of another consumer. Therefore on receipt of a complaint from a consumer who cannot carry out normal operations due to large harmonics, the licensee shall investigate the cause and eliminate or reduce the harmonics. This may involve identification of harmonic generating consumers and serving notices on them to instal filters. Harmonics may cause temporary over voltages and ferro-resonance. These harmonics may cause large neutral current.

(ii)   The Licensee shall monitor the voltage harmonics and current harmonics in terms of "Total Harmonic Distortion" (THD), a measure of distortion of the voltage or current wave form (which shall ideally be sinusoidal) and is the square root of the sum of squares of all voltage or current harmonics expressed as a percentage of the magnitude of the fundamental.

(iii)   In any installations the voltage and current Harmonic Distortion (THD) shall not exceed the limit as specified in the Central Electricity Authority (Technical Standards for connectivity to the Grid) Regulations, 2007, as amended from time to time, applicable to the Distribution Systems. The Consumer will take appropriate measures to restrict the THD to the stipulated limit.

(iv)   The total harmonic distortion for voltage at the connection point shall not exceed 5% with no individual harmonic higher than 3% and the total harmonic distortion for current drawn from the transmission/sub-transmission system at the connection point shall not exceed 8%.

(v)   The Licensee shall submit a quarterly report on THD of voltage and current harmonic to the Commission of following type of loads:

(a) Salient Pole synchronous generators
(b) Power Transformers of more than 15 years old
(c) Rolling Mills
(d) Induction Furnaces
(e) Welding Equipment
(f) Static Power Loads
(g) Inverters / power rectifiers
(h) Railway Traction Load

(vi)   All the users operating the power generating plant in parallel with the grid shall comply with the terms and conditions of the agreement for such connectivity laid down by the Distribution Licensee.

Such units shall also promptly comply with any direction that may be issued by the SLDC or the Distribution Licensee in the interest of orderly operation of the grid.

(vii)   The Consumer shall not keep connected to the Distribution Licensee's supply system any apparatus including phase splitters which in the Distribution Licensee's opinion may interfere with or effect injuriously the Distribution Licensee's

supply to other Consumers and may disturb the supply system in short or long term."

3. Amendment in Regulation 13(3) :

The existing regulation 13(3) shall be substituted by following**:**

"13(3) *Adequate data shall be recorded to calculate the following reliability indices. The licensee shall calculate the values of these indices as per the formula and methodology specified below:*

(a) **System Average Interruption Frequency Index (SAIFI)** : It is the average number of interruptions (longer than 5 minutes) that a customer would experience and is calculated as:

$$\textbf{SAIFI} = \sum_{i=1}^{n} (A_i * N_i) \, / \, N_t$$

(b) **System Average Interruption Duration Index (SAIDI)** : It is the average outage duration for each customer served and is calculated as:

$$\textbf{SAIDI} = \sum_{i=1}^{n} (B_i * N_i) \, / \, N_t$$

(c) **Momentary Average Interruption Frequency Index (MAIFI)** : It is the average number of interruptions (less than 5 minutes) that a customer would experience and is calculated as:

$$\textbf{MAIFI} = \sum_{i=1}^{N} (C_i * N_i) \, / \, N_t$$

Where;

A_i = total number of sustained interruptions (each longer than 5 minutes) on ith feeder for the month.

B_i = total duration of all sustained interruptions on ith feeder for the month.

C_i = total number of momentary interruptions (each less than or equal to 5 minutes) on ith feeder for the month.

N_i = Number of Consumer connected to ith feeder affected due to each interruption.

N_t = total number of Consumers in the distribution licensee's supply areas.

n = number of 11 kV feeders in the licensed area of supply (excluding those serving predominantly agricultural loads)."

By order of the Commission,
Parmanand Singh,
Secretary, BERC.

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